

We Claim:

1. A method of detecting the presence of a target UT116 polynucleotide in a test sample, said method comprising:

- 5 (a) contacting the test sample with at least one UT116-specific polynucleotide or complement thereof; and
- (b) detecting the presence of said target UT116 polynucleotide in the test sample, wherein said UT116-specific polynucleotide has at least 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NOS 1-12, and
- 10 fragments or complements thereof.

2. The method of claim 1, wherein said target UT116 polynucleotide is attached to a solid phase prior to performing step (a).

15 3. A method for detecting mRNA of UT116 in a test sample, comprising:

(a) performing reverse transcription with at least one primer in order to produce cDNA;

(b) amplifying the cDNA obtained from step (a) using UT116 oligonucleotides as sense and antisense primers to obtain UT116 amplicon; and

20 (c) detecting the presence of said UT116 amplicon, wherein the UT116 oligonucleotides utilized in steps (a) and (b) have at least 50% identity with a sequence selected from the group consisting of SEQUENCE ID NOS 1-12, and fragments or complements thereof.

25 4. The method of claim 3, wherein said test sample is reacted with a solid phase prior to performing one of steps (a), (b), or (c).

5. The method of claim 3, wherein said detection step comprises utilizing a detectable label capable of generating a measurable signal.

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6. A method of detecting a target UT116 polynucleotide in a test sample suspected of containing said target, comprising:

- (a) contacting said test sample with at least one UT116 oligonucleotide as a sense primer and with at least one UT116 oligonucleotide as an anti-sense primer and amplifying to obtain a first stage reaction product;
- 35 (b) contacting said first stage reaction product with at least one other UT116 oligonucleotide to obtain a second stage reaction product, with the proviso that the

other UT116 oligonucleotide is located 3' to the UT116 oligonucleotides utilized in step (a) and is complementary to said first stage reaction product; and

(c) detecting said second stage reaction product as an indication of the presence of the target UT116 polynucleotide, wherein the UT116 oligonucleotides utilized in steps (a) and (b) have at least 50% identity with a sequence selected from the group consisting of SEQUENCE ID NOS 1-12, and fragments or complements thereof.

7. ~~The method of claim 6, wherein said test sample is reacted with a solid phase prior to performing one of steps (a), (b), or (c).~~

8. The method of claim 6, wherein said detection step comprises utilizing a detectable label capable of generating a measurable signal.

9. ~~The method of claim 8, wherein said detectable label is reacted to a solid phase.~~

10. A method for producing a polypeptide comprising at least one UT116 epitope, said method comprising incubating host cells that have been transfected with an expression vector containing a polynucleotide sequence encoding a polypeptide, wherein said polypeptide comprises an amino acid sequence having at least 50% identity with an amino acid sequence selected from the group consisting of SEQUENCE ID NO 25, SEQUENCE ID NO 26, SEQUENCE ID NO 27, SEQUENCE ID NO 28 and SEQUENCE ID NO 29, and fragments thereof.

11. A method for detecting UT116 antigen in a test sample suspected of containing said UT116 antigen, comprising:

(a) contacting the test sample with an antibody or fragment thereof which specifically binds to at least one epitope of a UT116 antigen selected from the group consisting of SEQUENCE ID NO 25, SEQUENCE ID NO 26, SEQUENCE ID NO 27, SEQUENCE ID NO 28 and SEQUENCE ID NO 29, and fragments thereof, wherein said contacting is carried out for a time and under conditions sufficient for the formation of antibody/antigen complexes; and

(b) detecting the presence of said complexes as an indication of the presence of said UT116 antigen..

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12. The method of claim 11, wherein said antibody is attached to a solid phase.

13. A method for detecting the presence of antibodies specific for a UT116 antigen in a test sample suspected of containing such antibodies, said method comprising:

(a) contacting the test sample with a UT116 polypeptide, wherein said UT116 polypeptide contains at least one UT116 epitope derived from an amino acid sequence or fragment thereof having at least 50% identity to an amino acid sequence selected from the group consisting of SEQUENCE ID NO 25, SEQUENCE ID NO 26, SEQUENCE ID NO 27, SEQUENCE ID NO 28 and SEQUENCE ID NO 29, and fragments thereof, and further wherein said contacting is carried out for a time and under conditions sufficient to allow antigen/antibody complexes to form; and

(b) detecting the presence of said complexes as an indication of the presence of said antibodies specific for a UT116 antigen.

14. The method of claim 13, wherein said UT116 polypeptide is attached to a solid phase.

15. A method for producing antibodies which specifically bind to UT116 antigen, comprising administering to an individual an isolated immunogenic polypeptide or fragment thereof in an amount sufficient to elicit an immune response, wherein said immunogenic polypeptide comprises at least one UT116 epitope and has at least 50% identity to a sequence selected from the group consisting of SEQUENCE ID NO 25, SEQUENCE ID NO 26, SEQUENCE ID NO 27, SEQUENCE ID NO 28 and SEQUENCE ID NO 29, and fragments thereof.

16. A method for producing antibodies which specifically bind to UT116 antigen, comprising administering to an individual a plasmid comprising a sequence which encodes at least one UT116 epitope derived from a polypeptide having an amino acid sequence selected from the group consisting of SEQUENCE ID NO 25, SEQUENCE ID NO 26, SEQUENCE ID NO 27, SEQUENCE ID NO 28 and SEQUENCE ID NO 29, and fragments thereof.

17. The method of claim 1, wherein the presence of said target UT116 polynucleotide in said test sample is indicative of urinary tract disease.

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18. The method of claim 3, wherein the presence of said amplicon is indicative of urinary tract disease.

19. The method of claim 6, wherein the presence of said second stage reaction product is indicative of urinary tract disease.

20. The method of claim 11, wherein detection of said complexes is indicative of urinary tract disease.

21. The method of claim 13, wherein detection of said complexes is indicative of urinary tract disease.

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